Remote Monitoring Modem (RMM+) for ThermoKing MP-4000

- Real time container monitoring and tracking — anytime and anywhere

- Features built-in GPRS/GPS module for land based monitoring/tracking

- Bluetooth interface for fast wireless upload of controller software and log retrieval

- ISO 10368 Power Line communication for compliance with local reefer monitoring systems

- Easy installation as the RMM+ fits directly into the MP-4000 expansion slots

Description

The MP-4000 RMM+ is a remote communication device designed specifically for the MP-4000. The MP-4000 RMM+ combine industry standard ISO10368 communication with wireless technologies for fast data transfer, long distance communication and tracking.

When no local monitoring system is available, the MP-4000 RMM+ will via GPRS forward all exceptions such as alarms and power on/off events as they occur, and will provide full set of data at preset scheduled intervals to the Global Monitoring Server.

The Bluetooth interface allows for fast and wireless transfer of container firmware and data retrievals via the LogMan II device or container-to-container.

An important part of the MP-4000 RMM+ is the ISO 10368 power-line communication for monitoring and control of reefer containers onboard vessels or terminals. Each container equipped with an MP-4000 RMM+ is able to send data on its operating conditions and alarms to a local monitoring system, such as the REFCON system.

Besides monitoring, the MP-4000 RMM+ can be used to remotely control various reefer container functions, which include changing the setpoint, initiating PTI or defrost.

The MP-4000 RMM+ offers a number of important benefits, such as:

- Full transparency in the cooling chain

- Improved utilization of container fleet

- Reduced risk of potential cargo damage

- Reduction of operational cost due to less time-consuming manual inspections

- Minimize unexpected events such as container tampering, theft, diversion or holdups in transit.

- Improved safety of personnel

- Improve cargo documentation handling processes

- Optimization of MP-4000 operation with reduced risk of human errors

- Energy savings due to always updated MP-4000 software, which enables the MP-4000 to run the latest energy efficient programs

Applications

Enables ThermoKing Magnum+ containers for real time remote monitoring and tracking on vessels, in terminals and inland transportation

Centralized remote management of ThermoKing Magnum+ containers operating conditions, alarms, events, settings and positions.

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Environmental Specifications:

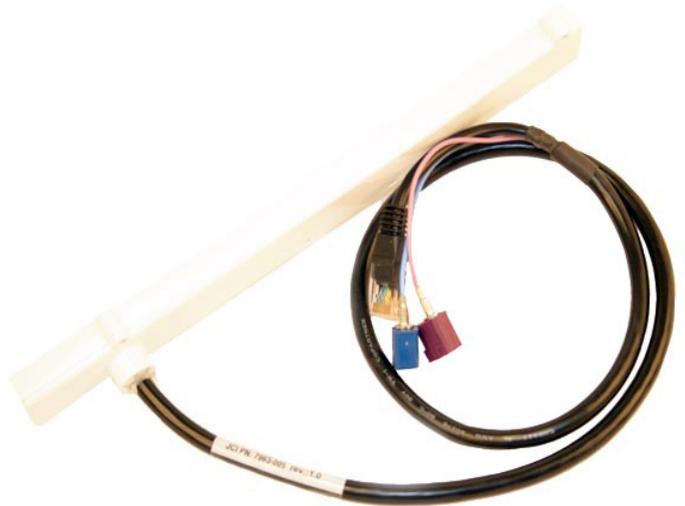|	
Operating temperature	$-20°C < T_{op} < 70°C$
Shock	20G operating, 50G non-operating
Vibration	Random (20Hz to 2kHz)

Software:

Over-the-Air firmware upgrade to apply new features

Immediate notification of controller alarms and container power ON/OFF events

Remote setting of scheduled transmission intervals and other communications rules

Internal hourly condition logging until transmission is established

Maximum operation in container power off mode: 120 days

Functions:

Bluetooth 2.1+EDR short range wireless communication

QUAD band GSM/GPRS (850/900/1800/1900 MHz) and TRI band UMTS (850/1900/2100 MHz) for long range wireless communication

ISO10368 compliant power line communication

32-channel fix embedded positioning system

RS232 interface toward host reefer container controller

Status LED's to indicate operating status

Mod-bus interface for external sensors

Digital input for opitional door sensor

Included items:

Installation instruction

Sticker "RMM+ modem installed"

MP-4000 RMM+ Antenna:

Hardware:

Serial FLASH for data and program storage, including controller firmware for automatic distribution

Inbuilt 3-axis motion sensor

Embedded SIM card

Self-contained rechargeable battery for container off-power operation

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2013.08.07 - Specifications subject to change without notice

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